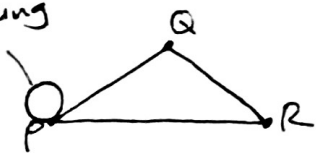


# Rangkaian Dalam Teori Graf

Gelung



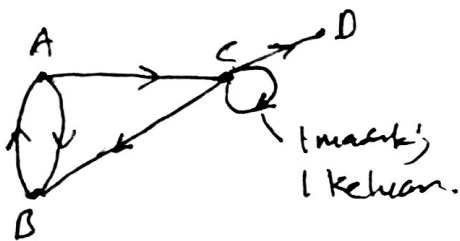
$$V = \{P, Q, R\}$$

$$E = \{(P, P), (P, Q), (P, R), (Q, R)\}$$

$$\sum d(v) = 2 \times n(E)$$

\* Jumlah derajat adalah selalu genap.

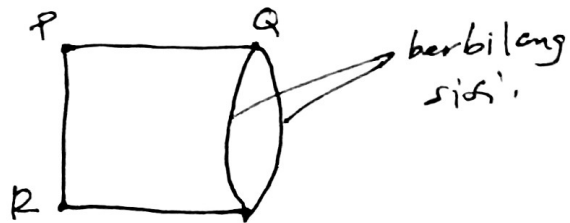
► Graf terarah



	$d_{in}(v)$	$d_{out}(v)$	$d(v)$
A	1	2	3
B	2	1	3
C	2	3	5
D	1	0	1
Total	6	6	12

$$\sum d_{in}(v) = \sum d_{out}(v)$$

$$\sum d_{in}(v) + \sum d_{out}(v) = \sum d(v)$$

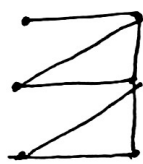


$$V = \{P, Q, R, S\}$$

$$E = \{(P, Q), (P, R), (Q, S), (Q, S), (R, S)\}$$

► Pokok adalah subgraf.

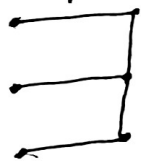
- Graf mudah
- Semua bucu berkait
- 1 laluan sahaja (tanpa kitaran)
- $n(E) = n(V) - 1$  (laluan terpendek)



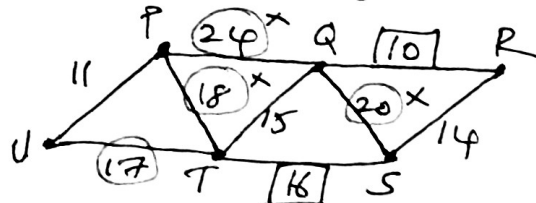
$$n(V) = 6, n(E) = 5$$

$$\text{Pokok: } n(E) = 6 - 1 = 5$$

(lebih 2 tepi)



► Problem Solving.



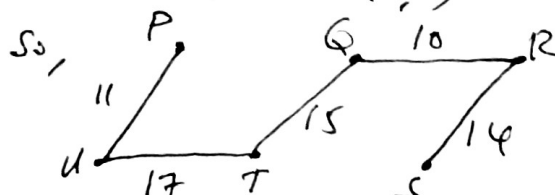
$$\boxed{10}$$
  
 or  

$$\boxed{16} \times$$

$$n(V) = 6; n(E) = 9,$$

$$\text{Pokok: } n(E) = 6 - 1 = 5.$$

(lebih 4!)



$$\therefore \text{Total min} = 10 + 14 + 15 + 17 + 11 = 67$$